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This result accords with the naked-eye view of the corona, which shows a very brilliant and very narrow ring of light immediately surrounding the dark body of the Moon.

The light of the sky around the bright corona, from an area of 40,900 square minutes, was found to equal 3.0 lamp units. This gives an *average* intrinsic actinic brilliancy of .0026 as compared with the lamp, or of .001 as compared with the surface of the full Moon.

The intrinsic brilliancy of the region of corona observed is found to be eight hundred times that of the surrounding sky.

C. D. Perrine.

Mt. Hamilton, Cal., January 27, 1909.

RESULTS OF FURTHER STUDIES ON THE STRUCTURE OF PHOTOGRAPHIC FILMS.

In a previous paper I gave the conclusion that the principal cause of the large discordances in measures of star photographs was to be found in the size and irregular arrangement of the silver grains composing the star image. Further investigations were undertaken to eliminate some of the trouble from these sources.

The details of the recent investigations will appear in a *Lick Observatory Bulletin,* and only the general results will be given here.

It was found that the accuracy was materially increased by giving sufficient exposure to insure light action entirely through the film, and full but slow development to give greater uniformity to the grain.

Rapid plates with an increased proportion of silver yield more accordant measures than plates with the normal amount of silver.

Where the structure is sufficiently uniform, as in Seed 23, and Transparency plates, it was found possible, by observing the above requirements, to produce negatives such that the range among the measures is only twice the uncertainty of the measures themselves.

Thin films appear to give much more reliable results than thick ones.

C. D. Perrine.

Mt. Hamilton, Cal., January 22, 1909.